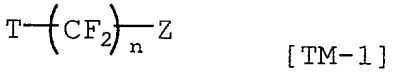
WHAT IS CLAIMED IS:

1. A lithographic printing plate precursor comprising an image forming layer containing at least one polymer compound having a fluoroaliphatic group on the side chain, wherein the fluoroaliphatic group is derived from a fluoroaliphatic compound produced by a telomerization method or an oligomerization method.

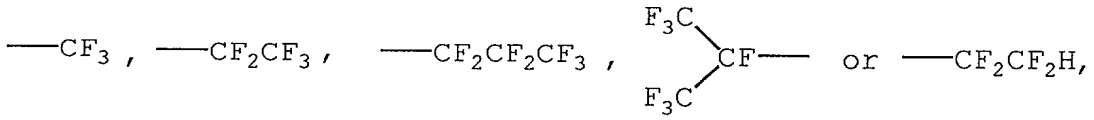
2. The lithographic printing plate precursor as claimed in claim 1, wherein the fluoroaliphatic group is derived from a fluoroaliphatic compound obtained by addition-polymerizing a tetrafluoroethylene in the presence of an alkyl iodide compound.

3. The lithographic printing plate precursor as claimed in claim 1, wherein the fluoroaliphatic compound produced by the telomerization method contains a compound represented by formula TM-1:

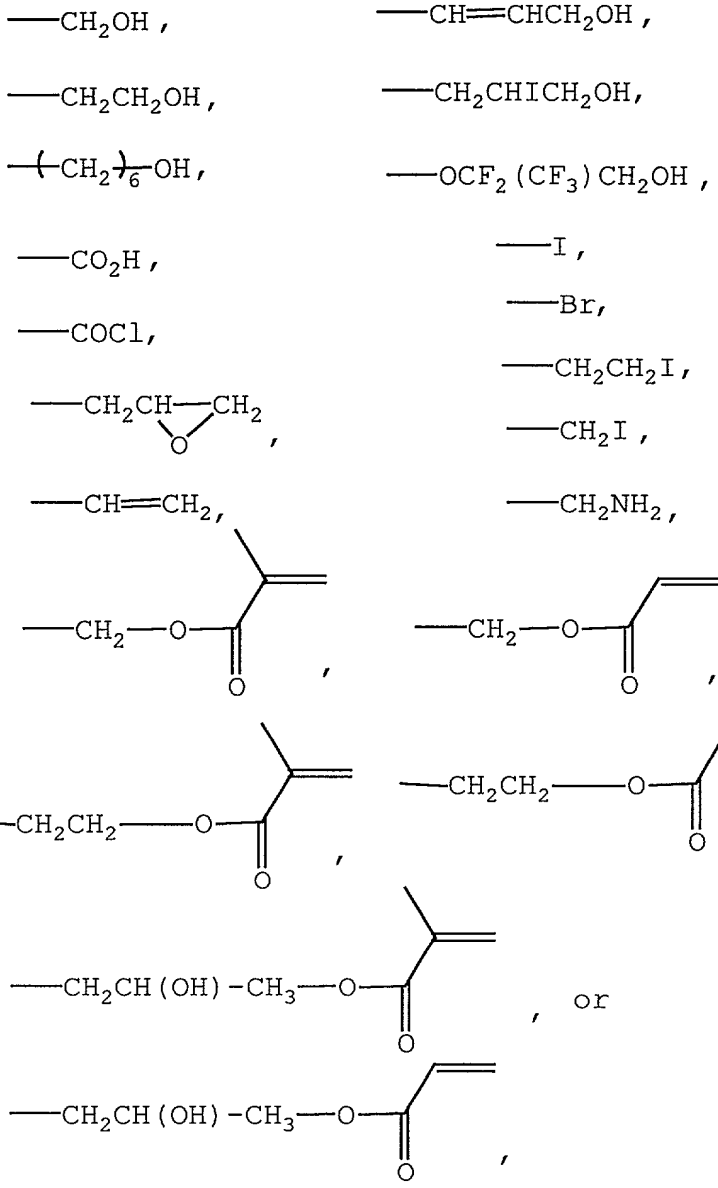


[TM-1]

wherein T represents



Z represents



, and n represents 0 to 20.

4. The lithographic printing plate precursor as claimed in claim 1, wherein the image forming layer

comprises the polymer compound in an amount of 0.001 to 10 wt%, based on the weight of the image forming layer.

5. The lithographic printing plate precursor as claimed in claim 1, which further comprises an aluminum substrate, wherein the image forming layer is a photosensitive layer containing a light-heat converting agent and a binder resin, and the photosensitive layer can increase or decrease in the solubility in an alkaline developer upon exposure to laser beams.

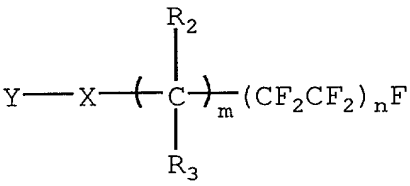
6. The lithographic printing plate precursor as claimed in claim 1, which further comprises an aluminum substrate, wherein the image forming layer is a photosensitive layer containing a light-heat converting agent, a heat radical generator and a radical polymerizable compound, and the photosensitive layer can decrease in the solubility in an alkaline developer upon exposure to laser beams.

7. The lithographic printing plate precursor as claimed in claim 1, which further comprises an aluminum substrate, wherein the substrate has small pits having an average opening diameter of 0.01 to 3 μm with the ratio of average depth of the small pits to the average opening

diameter of the small pits being from 0.1 to 0.5, by an electrochemical surface-roughening treatment using an aqueous solution containing a hydrochloric acid.

8. A lithographic printing plate precursor comprising an image forming layer containing at least one polymer compound, the polymer compound having a fluoroaliphatic group on the side chain,

wherein the fluoroaliphatic group is represented by the formula (1):



(1)

wherein R_2 and R_3 each independently represents a hydrogen atom or an alkyl group having from 1 to 4 carbon atoms, X represents a single bond or a divalent linking group, Y represents a moiety for binding to a polymer main chain, m represents an integer of 0 or more, and n represents an integer of 1 or more, and

the polymer compound comprises four fluoroaliphatic groups in which n in formula (1) is 3, 4, 5 and 6, respectively,

wherein the polymer compound satisfies one of the following conditions (I) and (II):

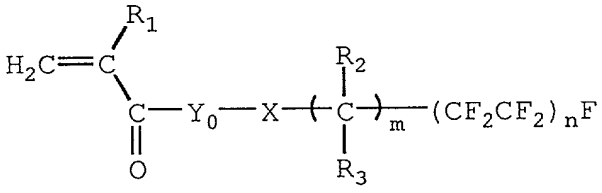
(I) a monomer unit having the fluoroaliphatic group in

which n in the formula (1) is 4, accounts for 40 to 97 mol% based on the sum total of the monomer units having groups in which n in the formula (1) represents 3, 4, 5 and 6; and

(II) a monomer unit having the fluoroaliphatic group in which n in the formula (1) is 3, accounts for 40 to 97 mol% based on the sum total of the monomer units having groups in which n in the formula (1) represents 3, 4, 5 and 6.

9. The lithographic printing plate precursor as claimed in claim 8, wherein the monomer unit having the group in which n of the formula (1) represents 4 accounts for 60 to 95 mol% based on the sum total of the monomer units having groups in which n of the formula (1) represents 3, 4, 5 and 6.

10. The lithographic printing plate precursor as claimed in claim 8, wherein the polymer compound contains a monomer unit represented by formula (2):



(2)

wherein R_1 represents a hydrogen atom, halogen atom or a

methyl group which may be substituted, R_2 and R_3 each independently represents a hydrogen atom or an alkyl group having from 1 to 4 carbon atoms, X represents a single bond or a divalent linking group, Y_0 represents a divalent organic group, m represents an integer of 0 or more, and n represents an integer of 1 or more.

11. The lithographic printing plate precursor as claimed in claim 8, wherein the polymer compound comprises a monomer unit having the fluoroaliphatic group in an amount of 1 wt% or more, based on weight of the polymer compound.

12. The lithographic printing plate precursor as claimed in claim 8, wherein the polymer compound comprises a monomer unit having the fluoroaliphatic group in an amount of 3 to 70 mol%, based on weight of the polymer compound.

13. The lithographic printing plate precursor as claimed in claim 8, wherein the polymer compound has a weight average molecular weight of 3,000 to 200,000.

14. The lithographic printing plate precursor as claimed in claim 8, wherein the image forming layer

comprises the polymer compound in an amount of 0.001 to 10 weight%, based on the weight of the image forming layer.

15. The lithographic printing plate precursor as claimed in claim 8, which further comprises an aluminum substrate, wherein the image forming layer is a photosensitive layer containing a light-heat converting agent and a binder resin, and the photosensitive layer can increase or decrease in the solubility in an alkaline developer upon exposure to laser beams.

16. The lithographic printing plate precursor as claimed in claim 8, which further comprises an aluminum substrate, wherein the image forming layer is a photosensitive layer containing a light-heat converting agent, a heat radical generator and a radical polymerizable compound, and the photosensitive layer can decrease in the solubility in an alkaline developer upon exposure to laser rays.

17. The lithographic printing plate precursor as claimed in claim 8, which further comprises an aluminum substrate, wherein the substrate has small pits having an average opening diameter of 0.01 to 3 μm with the ratio of average depth of the small pits to the average opening

diameter of the small pits being from 0.1 to 0.5, by an electrochemical surface-roughening treatment using an aqueous solution containing hydrochloric acid.

18. The lithographic printing plate precursor as claimed in claim 8, wherein the polymer compound is at least one selected from the group consisted of an acrylic resin, a methacrylic resin, a styryl resin, a polyester resin and a polyurethane resin, each of which has the fluoroaliphatic group on the side chain.

19. A plate-making method comprising:

imagewise exposing a lithographic printing plate precursor according to claim 1; and

processing the plate precursor with a developer that does not substantially contain a silicate.

20. A plate-making method comprising:

imagewise exposing a lithographic printing plate precursor according to claim 8; and

processing the plate precursor with a developer that does not substantially contain a silicate.